



PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Robert F. Richards et al.  
Application No. : 10/033,353  
Filed : October 25, 2001  
For : PIEZOELECTRIC MICRO-TRANSDUCERS, METHODS OF  
USE AND MANUFACTURING METHODS FOR SAME

Examiner : Thomas M. Dougherty  
Art Unit : 2834  
Docket No. : 67901-9  
Date : October 28, 2005

Mail Stop Issue Fee  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PETITION TO WITHDRAW HOLDING OF ABANDONMENT  
UNDER 37. C.F.R. § 1.181**

Commissioner for Patents:

The applicants received a Notice of Abandonment in the above-referenced matter dated October 13, 2005. The Notice of Abandonment indicated the reason was failure to pay the required issue fee and publication fee. The applicants respectfully request withdrawal of this notice because the issue fee had previously been paid.

The applicants received a Notice of Allowance on October 21, 2004. A copy of that notice is attached hereto. On January 14, 2005, the applicants paid the issue fee and publication fee by check. A copy of the issue fee transmittal and check are also attached hereto. A copy of the postcard indicating receipt of the issue fee

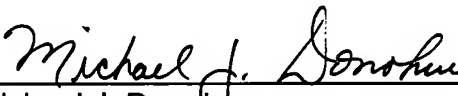
transmittal and check by the Patent Office, dated January 18, 2005, is also enclosed herewith.

On February 7, 2005, the applicants petitioned for withdrawal of the application from issuance under 37 C.F.R. 1.313(c) to allow consideration of additional prior art references.

The additional references were considered by the Examiner and a Notice of Allowability mailed April 7, 2005. Also included was a Notice of Allowance and fees due. A copy of the Notice of Allowability and Notice of Allowance/Fees Due are also attached hereto. It should be noted that no fees were due because the issue fee had already been paid on January 14, 2005.

Accordingly, the applicants respectfully request that the Notice of Abandonment be withdrawn and the application allowed to issue. If questions remain regarding this application, please contact the undersigned at (206) 628-7640.

Respectfully submitted,  
Robert F. Richards et al.  
Davis Wright Tremaine LLP

  
\_\_\_\_\_  
Michael J. Donohue  
Registration No. 35,859

MJD:gatc

Enclosures: First Notice of Allowance  
Payment of Issue Fee Transmittal  
Second Notice of Allowance  
Power of Attorney  
Statement Under 37 .CFR 3.73(b)

2600 Century Square  
1501 Fourth Avenue  
Seattle, Washington 98101-1688  
Phone: (206) 622-3150  
Fax: (206) 628-7699

1717122\_1.DOC



EXPRESS MAIL NO. EV620104686US

UNITED STATES PATENT AND TRADEMARK OFFICE

WSURF/JBH  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
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P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

24197 7590 10/21/2004  
KLARQUIST SPARKMAN, LLP  
121 SW SALMON STREET  
SUITE 1600  
PORTLAND, OR 97204

DOCKETED FOR: 1.21.05  
1.21.05

EXAMINER

DOUGHERTY, THOMAS M

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 10/21/2004

COMPUTER CJS  
CJS  
CJS  
CJS

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,353	10/25/2001	Robert F. Richards	4630-61498	7202

TITLE OF INVENTION: PIEZOELECTRIC MICRO-TRANSDUCERS, METHODS OF USE AND MANUFACTURING METHODS FOR SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$685	\$300	\$985	01/21/2005

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,353	10/25/2001	Robert F. Richards	4630-61498	7202
24197	7590	10/21/2004	EXAMINER	
KLARQUIST SPARKMAN, LLP 121 SW SALMON STREET SUITE 1600 PORTLAND, OR 97204			DOUGHERTY, THOMAS M	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 10/21/2004

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**  
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

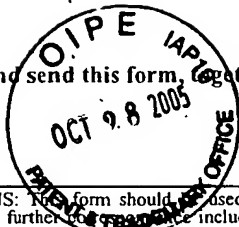
Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail

Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
or Fax (703) 746-4000



INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

24197 7590 10/21/2004

KLARQUIST SPARKMAN, LLP  
121 SW SALMON STREET  
SUITE 1600  
PORTLAND, OR 97204

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (703) 746-4000, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,353	10/25/2001	Robert F. Richards	4630-61498	7202

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APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$685	\$300	\$985	01/21/2005

EXAMINER	ART UNIT	CLASS-SUBCLASS
DOUGHERTY, THOMAS M	2834	310-328000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1	_____
2	_____
3	_____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s):

- ☐ A check in the amount of the fee(s) is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,353	10/25/2001	Robert F. Richards	4630-61498	7202
24197	7590	10/21/2004		
KLARQUIST SPARKMAN, LLP 121 SW SALMON STREET SUITE 1600 PORTLAND, OR 97204				
			EXAMINER DOUGHERTY, THOMAS M	
			ART UNIT 2834	PAPER NUMBER

DATE MAILED: 10/21/2004

**Notice of Fee Increase on October 1, 2004**

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after October 1, 2004, then the amount due will be higher than that set forth in the "Notice of Allowance and Fee(s) Due" because some fees will increase effective October 1, 2004. See Revision of Patent Fees for Fiscal Year 2005; Final Rule, 69 Fed. Reg. 52604, 52606 (May 10, 2004).

The current fee schedule is accessible from WEB site (<http://www.uspto.gov/main/howtofees.htm>).

If the fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due" but not the correct amount in view of the fee increase, a "Notice of Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice of Pay Balance of Issue Fee," if the response to the Notice of Allowance is to be filed on or after October 1, 2004 (or mailed with a certificate of mailing on or after October 1, 2004), the issue fee paid should be the fee that is required at the time the fee is paid. See Manual of Patent Examining Procedure (MPEP), Section 1306 (Eighth Edition, Rev. 2, May 2004). If the issue fee was previously paid, and the response to the "Notice of Allowance and Fee(s) Due" includes a request to apply a previously-paid issue fee to the issue fee now due, then the difference between the issue fee amount at the time the response is filed and the previously-paid issue fee should be paid. See MPEP Section 1308.01.

Effective October 1, 2004, 37 CFR 1.18 is amended by revising paragraphs (a) through (c) to read as set forth below.

**Section 1.18 Patent post allowance (including issue) fees.**

- (a) Issue fee for issuing each original or reissue patent, except a design or plant patent:
- By a small entity (Sec. 1.27(a))..... \$685.00
  - By other than a small entity..... \$1,370.00
- (b) Issue fee for issuing a design patent:
- By a small entity (Sec. 1.27(a))..... \$245.00
  - By other than a small entity..... \$490.00
- (c) Issue fee for issuing a plant patent:
- By a small entity (Sec. 1.27(a))..... \$330.00
  - By other than a small entity..... \$660.00

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.



✓

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.

7. ☐ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other \_\_\_\_\_

THOMAS M. DOUGHERTY  
PRIMARY EXAMINER  
GROUP 210



EXPRESS MAIL NO. EV620104686US

CLIENT/MATTER NO. 4630-61498-01 ATTY/SEC JBH:lam  
INVENTOR(S): Richards et al.  
APP. NO. 10/033,353 FILING DATE 10-25-01  
The following, due 1/21/05, mailed 1-14-05,  
by First Class Mail, was received in the U.S. PTO on the date stamped hereon:

<input type="checkbox"/> Amendment/Response <input type="checkbox"/> After Final Action	
Extension of Time/Extension Fee for <input type="checkbox"/> Months <input type="checkbox"/> Revised Drawings <input type="checkbox"/> sht(s)	
<input type="checkbox"/> Notice to File Missing Parts - Date <input type="checkbox"/>	<input type="checkbox"/> Ltr to Draftsperson
<input type="checkbox"/> Notice to File Corrected App. Papers - Date <input type="checkbox"/>	<input type="checkbox"/> Notice-Allowability
<input type="checkbox"/> Comb. Dec./POA <input type="checkbox"/> Sht(s) Drawings <input type="checkbox"/> Late Fee	<input type="checkbox"/> Sht(s) Drawings
<input checked="" type="checkbox"/> Issue Fee Transmittal (Form PTO-85b)	<input type="checkbox"/> Sequence Listing <input type="checkbox"/> pages
<input type="checkbox"/> Supp. Dec. <input checked="" type="checkbox"/> Issue Fee <u>Publication</u> fees	<input type="checkbox"/> Stmt in Comp. <input type="checkbox"/> disk
<input type="checkbox"/> IDS <input type="checkbox"/> Form PTO-1449/Ref.	Petition <u>JAN 18 2005</u>
Assignment to: <input type="checkbox"/> Recordal Sheet	
Transmittal Ltr. + <input type="checkbox"/> 1 <input type="checkbox"/> 2 copy(ies)	<input type="checkbox"/> Request for Corrected Filing Receipt
<input checked="" type="checkbox"/> Check No. <u>112884</u> for <u>\$1000.00</u>	<input checked="" type="checkbox"/> Deposit Acct. 02-4550 Authority



CLIENT/MATTER NO. <u>4650-61498-01</u>		ATTY/SEC <u>JBH:lam</u>	
INVENTOR(S): <u>Richards et al.</u>			
APP. NO. <u>10/033,353</u>		FILING DATE <u>10-25-01</u>	
The following, due <u>1/21/05</u>		mailed <u>1-14-05</u>	
by First Class Mail, was received in the U.S. PTO on the date stamped hereon:			
<input type="checkbox"/> Amendment/Response		<input type="checkbox"/> After Final Action	
<input type="checkbox"/> Extension of Time/Extension Fee for <u>    </u> Months		<input type="checkbox"/> Revised Drawings <u>    </u> shl(s)	
<input type="checkbox"/> Notice to File Missing Parts - Date <u>    </u>		<input type="checkbox"/> Ltr to Draftsperson	
<input type="checkbox"/> Notice to File Corrected App. Papers - Date <u>    </u>		<input type="checkbox"/> Notice-Allowability	
<input type="checkbox"/> Comb. Dec./POA <u>    </u> Shl(s) Drawings <u>    </u> Late Fee <u>    </u>		<input type="checkbox"/> Shl(s) Drawings <u>    </u>	
<input checked="" type="checkbox"/> Issue Fee Transmittal (Form PTO-85b)		<input type="checkbox"/> Sequence Listing <u>    </u> pages	
<input type="checkbox"/> Supp. Dec. <input checked="" type="checkbox"/> Issue <u>Publication</u> fees		<input type="checkbox"/> Stmt in Comp. <u>    </u> Disk	
<input type="checkbox"/> IDS		<input type="checkbox"/> Form PTO-1449/Ref.	
<input type="checkbox"/> Assignment to: <u>    </u>		<input type="checkbox"/> Petition	
<input type="checkbox"/> Transmittal Ltr. + <u>1</u> <u>2</u> copy(ies)		<input type="checkbox"/> Recordal Sheet	
<input checked="" type="checkbox"/> Check No. <u>112884</u> for <u>\$1000.00</u>		<input type="checkbox"/> Request for Corrected Filing Receipt	
		<input checked="" type="checkbox"/> Deposit Acct. 02-4550 Authority	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Richards et al.

Application No. 10/033,353

Filed: October 25, 2001

Confirmation No. 7202

For: PIEZOELECTRIC MICRO-  
TRANSDUCERS, METHODS OF USE  
AND MANUFACTURING METHODS  
FOR SAME

Examiner: Thomas M. Dougherty

Art Unit: 2834

Attorney Reference No. 4630-61498-01

MAIL STOP ISSUE FEE  
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P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

CERTIFICATE OF MAILING

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: MAIL STOP ISSUE FEE, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on the date shown below.

Attorney  
for Applicant(s)

Date Mailed January 14, 2005

TRANSMITTAL LETTER

Enclosed for filing in the above-referenced application are the following:

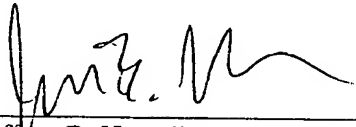
- ☒ In connection with issuance of a patent:
  - ☒ Form PTOL-85b
- ☒ Issue Fee (\$700.00)
- ☒ Publication Fee (\$300.00)
- ☒ A check in the amount of \$1000.00 to cover the above-listed fees.
- ☒ The Director is hereby authorized to charge any additional fees that may be required in connection with issuance of a patent, or credit over-payment, to Account No. 02-4550. A copy of this sheet is enclosed.
- ☒ Please return the enclosed postcard to confirm that the items listed above have been received.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 226-7391  
Facsimile: (503) 228-9446

By

  
Jeffrey B. Haendler  
Registration No. 43,652

cc: Docketing

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail**

Mail Stop ISSUE  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 or Fax (703) 746-4000

OCT 28 2005

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

24197 7590 10/21/2004

KLARQUIST SPARKMAN, LLP  
 121 SW SALMON STREET  
 SUITE 1600  
 PORTLAND, OR 97204

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (703) 746-4000, on the date indicated below.

Jeffrey B. Haendler (Depositor's name)  
 (Signature)  
 January 14, 2005 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,353	10/25/2001	Robert F. Richards	4630-61498	7202

TITLE OF INVENTION: PIEZOELECTRIC MICRO-TRANSDUCERS, METHODS OF USE AND MANUFACTURING METHODS FOR SAME

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nonprovisional	YES	\$685	\$300	\$985	01/21/2005

EXAMINER	ART UNIT	CLASS-SUBCLASS
DOUGHERTY, THOMAS M	2834	310-328000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1. Klarquist Sparkman LLP

2. \_\_\_\_\_

3. \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

Washington State University  
 Research Foundation

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Pullman, Washington

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:

- ☒ Issue Fee  
☒ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s):

- ☒ A check in the amount of the fee(s) is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☒ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 02-4550 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature

Jeffrey B. Haendler

Date

January 14, 2005

Typed or printed name

Registration No. 43,652

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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KLARQUIST SPARKMAN, LLP

DATE: 01-07-05

PAYEE: Director - U.S. Patent and Trademark Office

CHECK # 112884

INV. DATE	INVOICE #	DESCRIPTION	AMT. PAID
01/07/05	7415	WSURF 4630-61498-01 Issue, publication	\$*****1,000.00

*law*

**KLARQUIST SPARKMAN, LLP**

DATE: 01-07-05		PAYEE: Director - U.S. Patent and Trademark Office	CHECK # 112884
INV. DATE	INVOICE #	DESCRIPTION	AMT. PAID
01/07/05	7415	WSURF 4630-61498-01 Issue, publication	\$*****1,000.00

**KLARQUIST SPARKMAN, LLP**  
PATENT AND TRADEMARK LAWYERS  
ONE WORLD TRADE CENTER, SUITE 1600  
121 S.W. SALMON STREET PH. 503-226-7391  
PORTLAND, OREGON 97204-2988 USA

WELLS FARGO BANK  
FIFTH AND SALMON BRANCH  
PORTLAND, OR 97208  
11-24  
1210(8)

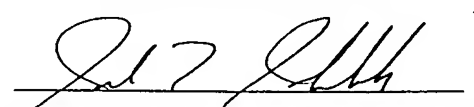
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CHECK DATE  
01/07/2005

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PAY **Director - U.S. Patent and Trademark Office**  
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**KLARQUIST SPARKMAN, LLP**

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⑈ 112884 ⑈

⑆ 121000248 ⑆

4159 589456 ⑈

\*\*\*\*\*  
\*\*\* TX REPORT \*\*\*  
\*\*\*\*\*

TRANSMISSION OK

TX/RX NO	2522
CONNECTION TEL	7038729306ppp6149801
SUBADDRESS	
CONNECTION ID	
ST. TIME	02/07 15:49
USAGE T	01'41
PGS. SENT	6
RESULT	OK

JBH:lam 02/07/05 4630-61498-01 352302

PATENT  
Attorney Reference Number 4630-61498-01**KLARQUIST SPARKMAN, LLP**16th Floor World Trade Center, 121 S.W. Salmon Street, Portland, Oregon 97204 U.S.A.  
PHONE: 503-595-5300 FAX: 503-228-9446**PLEASE DELIVER DIRECTLY TO THE OFFICE OF PETITIONS**

Fax No.: (703) 872-9306

Total No. Pages: 6 including this cover sheet

Message: Transmitted herewith for filing in the below-identified application is a Petition to Withdraw Application Under 37 CFR 1.313(c) and Request for Continued Examination. If you do not receive all pages or if you have problems receiving transmittal, please call Lynn Martin at (503) 226-7391. The fee (small entity) has been calculated as shown below.

In re application of: Richards et al.

Application No. 10/033,353

Filed: October 25, 2001

Confirmation No. 7202

For: PIEZOELECTRIC MICRO-  
TRANSDUCERS, METHODS OF USE  
AND MANUFACTURING METHODS  
FOR SAME

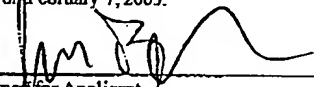
Examiner: Thomas M. Dougherty

Art Unit: 2834

Attorney Reference No. 4630-61498-01

**CERTIFICATE OF FACSIMILE**

I hereby certify that this correspondence and any documents referred to as being transmitted herewith are being facsimile transmitted to the Patent and Trademark Office via (703) 872-9306 on February 7, 2005.

  
Attorney for Applicant**REQUEST FOR CONTINUED EXAMINATION  
TRANSMITTAL LETTER**

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the application referenced above.

NOTE: Request for Continued Examination Practice (RCE) under 37 C.F.R. §1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application.

## Auto-Reply Facsimile Transmission



TO: Fax Sender at 503 228 9446  
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Received  
Cover  
Page  
=====>

02/07/2005 13:49 FAX 503 228 9446 KJARQUIST SPARKMAN 001

JBR:tem 02/07/05 4630-61498-01 372302 PATENT  
Attorney Reference Number 4630-61498-01

**KJARQUIST SPARKMAN, LLP**  
16th Floor World Trade Center, 121 S.W. Salmon Street, Portland, Oregon 97204 U.S.A.  
PHONE: 503-595-5300 FAX: 503-228-9446

**PLEASE DELIVER DIRECTLY TO THE OFFICE OF PETITIONS**  
Fax No.: (703) 872-9306  
Total No. Pages: 6 including this cover sheet  
Message: Transmitted herewith for filing in the below-identified application is a Petition to Withdraw Application Under 37 CFR 1.313(c) and Request for Continued Examination. If you do not receive all pages or if you have problems receiving transmittal, please call Lynn Martin at (503) 226-7591. The fee (small entity) has been calculated as shown below.

In re application of: Richards et al.  
Application No. 10/033,353  
Filed: October 25, 2001  
Confirmation No. 7202  
For: PIEZOELECTRIC MICRO-TRANSDUCERS, METHODS OF USE AND MANUFACTURING METHODS FOR SAME  
Examiner: Thomas M. Dougherty  
Art Unit: 2834  
Attorney Reference No. 4630-61498-01

**CERTIFICATE OF FACSIMILE**  
I hereby certify that this correspondence and any documents referred to as being transmitted herewith are being facsimile transmitted to the Patent and Trademark Office via (703) 872-9306 on February 7, 2005.  
*[Signature]*  
Attorney for Applicant

**REQUEST FOR CONTINUED EXAMINATION  
TRANSMITTAL LETTER**

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the application referenced above.  
NOTE: Request for Continued Examination Practice (RCE) under 37 C.F.R. § 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application.

☒ Enclosed are:  
☒ Petition to Withdraw Application Under 37 CFR 1.313(c)(2)  
☒ Request for Continued Examination  
☒ Information Disclosure Statement (IDS), Form 1449

FILING FEE					
For	No. after amendment	No. paid for previously	Extra	Rate	Fee
Fee under 37 CFR 1.17(e)					\$395.00
Total Claims	54	-54*	=	0	\$50.00
Indep. Claims	12	-12**	=	0	\$200.00
Total RCE filing fee					\$395.00
Petition to Withdraw Application filing fee (37 C.F.R. § 1.17(h))					\$130.00
<b>TOTAL FEES</b>					<b>\$525.00</b>

\*greater of twenty or number for which fee has been paid \*\*greater of three or number for which fee has been paid

PAGE 15\* RCVO AT 2/7/2005 6:46:41 PM [Eastern Standard Time] \* SVR:USPTO-EFAXF-102 \* DNS:8725325 \* CSD:503 228 9446 \* DURATION [trn-15] 02-10



WSU Research/JBH

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
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P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,353	03/01/2005	6861784	4630-61498 - 01	7202

24197 7590 02/09/2005

KLARQUIST SPARKMAN, LLP  
121 SW SALMON STREET  
SUITE 1600  
PORTLAND, OR 97204

DOCKETED FOR: '3/9/05'  
3/1/07 "and Maint fee dates"

COMPUTER: mb  
BOOK: 50  
SCAN: mb  
CC: \_\_\_\_\_

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**  
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 58 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571) 272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

APPLICANT(s) (up to 18 names are included below, see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Robert F. Richards, Pullman, WA;  
David Bahr, Pullman, WA;  
Cecilia Richards, Pullman, WA;



**KLARQUIST SPARKMAN, LLP**

16th Floor World Trade Center, 121 S.W. Salmon Street, Portland, Oregon 97204 U.S.A.  
PHONE: 503-595-5300 FAX: 503-228-9446

**PLEASE DELIVER DIRECTLY TO THE OFFICE OF PETITIONS**

Fax No.: (703) 872-9306

Total No. Pages: 6 including this cover sheet

**Message:** Transmitted herewith for filing in the below-identified application is a Petition to Withdraw Application Under 37 CFR 1.313(c) and Request for Continued Examination. If you do not receive all pages or if you have problems receiving transmittal, please call Lynn Martin at (503) 226-7391. The fee (small entity) has been calculated as shown below.

In re application of: Richards et al.

Application No. 10/033,353

Filed: October 25, 2001

Confirmation No. 7202

**For:** PIEZOELECTRIC MICRO-  
TRANSDUCERS, METHODS OF USE  
AND MANUFACTURING METHODS  
FOR SAME

Examiner: Thomas M. Dougherty

Art Unit: 2834

Attorney Reference No. 4630-61498-01

**CERTIFICATE OF FACSIMILE**

I hereby certify that this correspondence and any documents referred to as being transmitted herewith are being facsimile transmitted to the Patent and Trademark Office via (703) 872-9306 on February 7, 2005.

Attorney for Applicant

**REQUEST FOR CONTINUED EXAMINATION  
TRANSMITTAL LETTER**

**This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the application referenced above.**

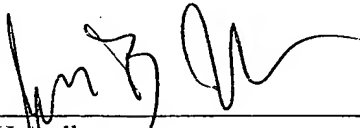
NOTE: Request for Continued Examination Practice (RCE) under 37 C.F.R. § 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application.

- ☒ Enclosed are:
- ☒ Petition to Withdraw Application Under 37 CFR 1.313(c)(2)
  - ☒ Request for Continued Examination
  - ☒ Information Disclosure Statement (IDS), Form 1449

FILING FEE					
For	No. after amendment	No. paid for previously	Extra	Rate	Fee
Fee under 37 CFR 1.17(e)					\$395.00
Total Claims	54	-54*	=	0	\$50.00
Indep. Claims	12	-12**	=	0	\$200.00
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Petition to Withdraw Application filing fee (37 C.F.R. § 1.17(h))					\$130.00
<b>TOTAL FEES</b>					<b>\$525.00</b>

\*greater of twenty or number for which fee has been paid. \*\*greater of three of number for which fee has been paid.

- ☒ Please charge \$525.00 and any additional fees that may be required in connection with filing this RCE or Petition to Withdraw Application to Deposit Account 02-4550.
- ☒ If the Patent and Trademark Office determines that this amendment results in an additional application size fee for pages in excess of 100, please charge the fee to Deposit Account No. 02-4550.

  
\_\_\_\_\_  
Jeffrey B. Haendler  
Registration No. 43,652

February 7, 2005  
Date

cc: Docketing



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Richards et al.

Application No. 10/033,353

Filed: October 25, 2001

Confirmation No. 7202

For: PIEZOELECTRIC MICRO-  
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FOR SAME

Examiner: Thomas M. Dougherty

Art Unit: 2834

Attorney Reference No. 4630-61498-01

CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence and any documents referred to as being transmitted herewith are being facsimile transmitted to the Patent and Trademark Office via (703) 872-9306 on February 7, 2005.

\_\_\_\_\_  
Attorney for Applicant

**PETITION TO WITHDRAW APPLICATION FROM ISSUANCE  
UNDER 37 CFR 1.313(c)**

Applicants petition to withdraw the above-referenced application from issuance pursuant to 37 CFR 1.313(c)(2) and are submitting herewith a Request for Continued Examination to support this petition.

The fee (\$130.00) for filing this Petition is included in the "Filing Fee" table on the attached transmittal letter.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

By

\_\_\_\_\_  
Jeffrey B. Haendler  
Registration No. 43,652

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 595-5300  
Facsimile: (503) 228-9446



JBH:lam 02/07/05 4630-61498-01 352319

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In re application of:** Richards et al.

**Application No.** 10/033,353

**Filed:** October 25, 2001

**Confirmation No.** 7202

**For:** PIEZOELECTRIC MICRO-  
TRANSDUCERS, METHODS OF USE  
AND MANUFACTURING METHODS  
FOR SAME

**Examiner:** Thomas M. Dougherty

**Art Unit:** 2834

**Attorney Reference No.** 4630-61498-01

CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence and any documents referred to as being transmitted herewith are being facsimile transmitted to the Patent and Trademark Office via (703) 872-9306 on February 7, 2005.

\_\_\_\_\_  
Attorney for Applicant

INFORMATION DISCLOSURE STATEMENT  
PURSUANT TO 37 C.F.R. § 1.97(b)(4)

Listed on the accompanying form PTO-1449 are several English-language documents. Applicants respectfully request that these documents be listed as references cited on the issued patent.

Copies of United States patents and United States published patent applications do not have to be provided to the Patent Office (37 C.F.R. 1.98(a)(2)(ii)). Copies of unpublished U.S. applications do not have to be provided, as long as the application is available on PAIR, as this requirement of 37 C.F.R. § 1.98(a)(2)(iii) has been waived by the United States Patent and Trademark Office pursuant to the Official Gazette Notice on October 19, 2004 (1287 OG 163). Applicants will provide copies of such patents or applications upon request.

Applicants filed this Information Disclosure Statement ("IDS") before the mailing of a first Office action after the filing of a request for continued examination. As a result, no fee should be required to file this IDS. However, if the Patent Office determines that a fee is


required for Applicants to file this IDS, please charge any such fees, or credit overpayment, to Deposit Account No. 02-4550. A **duplicate** copy of this IDS is enclosed.

The filing of this IDS shall not be construed to be an admission that the information cited in the statement is, or is considered to be, prior art or otherwise material to patentability as defined in 37 C.F.R. §1.56.

Respectfully submitted,

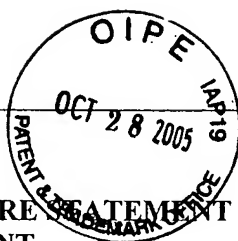
KLARQUIST SPARKMAN, LLP

By

  
\_\_\_\_\_  
Jeffrey B. Haendler  
Registration No. 43,652

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 226-7391  
Facsimile: (503) 228-9446

cc: Docketing



# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Attorney Docket Number	4630-61498-01
Application Number	10/033,353
Filing Date	October 25, 2001
First Named Inventor	Richards
Art Unit	2834
Examiner Name	Thomas M. Dougherty

## U.S. PATENT DOCUMENTS

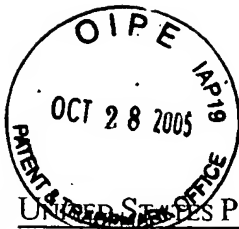
Copies of U.S. Patent documents do not need to be provided, unless requested by the Patent and Trademark Office. For patents, provide the patent number and the issue date. For published U.S. applications, provide the publication number and the publication date. For unpublished pending patent applications, provide the application number and the filing date.

Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
	✓	5,696,491	12/9/1997	White et al.
	✓	5,932,940	8/3/1999	Epstein et al.
	✓	6,109,222	8/29/2000	Glezer et al.
	✓	6,304,176	10/16/2001	Discenzo
	✓	6,574,963	6/10/2003	Tadayon et al.
	✓	6,606,251	8/12/2003	Kenny, Jr. et al.
	○	6,628,040	9/30/2003	Pelrine et al.
	✓	6,628,522	9/30/2003	Trautman et al.
	✓	2002/0184907	12/12/2002	Vaiyapuri et al.
	✓	2003/0043531	3/6/2003	Trautman et al.
	✓	2003/0173942	9/18/2003	Kenny, Jr. et al.
	✓	2003/0197448	10/23/2003	Tanielian
	✓	2003/0222341	12/4/2003	Oberhardt et al.

EXAMINER  
SIGNATURE:

DATE  
CONSIDERED:

\* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.



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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
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Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

24197 7590 04/07/2005  
KLARQUIST SPARKMAN, LLP  
121 SW SALMON STREET  
SUITE 1600  
PORTLAND, OR 97204

DOCKETED FOR: 7/7/05, 7/7/05  
6/17/05  
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CC: *Accounting*

EXAMINER

DOUGHERTY, THOMAS M

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 04/07/2005

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,353	10/25/2001	Robert F. Richards	4630-61498	7202

TITLE OF INVENTION: PIEZOELECTRIC MICRO-TRANSDUCERS, METHODS OF USE AND MANUFACTURING METHODS FOR SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$0	\$0	\$0	07/07/2005

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.



## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail

**Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax (703) 746-4000**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

**CURRENT CORRESPONDENCE ADDRESS** (Note: Use Block 1 for any change of address)

24197 7590 04/07/2005

**KLARQUIST SPARKMAN, LLP**  
**121 SW SALMON STREET**  
**SUITE 1600**  
**PORTLAND, OR 97204**

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

### Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (703) 746-4000, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,353	10/25/2001	Robert F. Richards	4630-61498	7202

**TITLE OF INVENTION:** PIEZOELECTRIC MICRO-TRANSDUCERS, METHODS OF USE AND MANUFACTURING METHODS FOR SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$0	\$0	\$0	07/07/2005

EXAMINER	ART UNIT	CLASS-SUBCLASS
DOUGHERTY, THOMAS M	2834	310-328000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1	_____
2	_____
3	_____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

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(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s):

- ☐ A check in the amount of the fee(s) is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

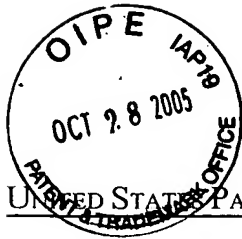
Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,353	10/25/2001	Robert F. Richards	4630-61498	7202
24197	7590	04/07/2005		
KLARQUIST SPARKMAN, LLP 121 SW SALMON STREET SUITE 1600 PORTLAND, OR 97204				
EXAMINER DOUGHERTY, THOMAS M				
ART UNIT 2834			PAPER NUMBER	

DATE MAILED: 04/07/2005

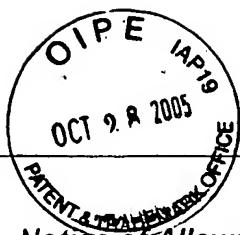
**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**  
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571) 272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.



### Notice of Allowability

Application No.	Applicant(s)	
10/033,353	RICHARDS ET AL.	
Examiner	Art Unit	
Thomas M. Dougherty	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/07/05.
2. ☒ The allowed claim(s) is/are 1-5, 7-21 and 75-107.
3. ☒ The drawings filed on 02/03/04 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>205</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                          | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____  |

*Thomas M. Dougherty*  
**TOM DOUGHERTY**  
**PRIMARY EXAMINER**



02/07/2005 15:50 FAX 503 228 9446

KLARQUIST SPARKMAN

0008

JBH:lmw 02/07/05 4630-61498-01 352323

INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Attorney Docket Number	4630-61498-01	
		Application Number	10/033,353	
		Filing Date	October 25, 2001	
		First Named Inventor	Richards	
		Art Unit	2834	
		Examiner Name	Thomas M. Dougherty	
<b>U.S. PATENT DOCUMENTS</b>				
Copies of U.S. Patent documents do not need to be provided, unless requested by the Patent and Trademark Office. For patents, provide the patent number and the issue date. For published U.S. applications, provide the publication number and the publication date. For unpublished pending patent applications, provide the application number and the filing date.				
Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
TMD		5,696,491	12/9/1997	White et al.
mb		5,932,940	8/3/1999	Epstein et al.
mb		6,109,222	8/29/2000	Glezer et al.
mb		6,304,176	10/16/2001	Discenzo
mb		6,574,963	6/10/2003	Tadayon et al.
mb		6,606,251	8/12/2003	Kenny, Jr. et al.
mb		6,628,040	9/30/2003	Pelrine et al.
mb		6,628,522	9/30/2003	Trautman et al.
mb		2002/0184907	12/12/2002	Vaiyapuri et al.
mb		2003/0043531	3/6/2003	Trautman et al.
mb		2003/0173942	9/18/2003	Kenny, Jr. et al.
mb		2003/0197448	10/23/2003	Tanielian
mb		2003/0222341	12/4/2003	Oberhardt et al.

EXAMINER SIGNATURE: <i>Thomas M. Dougherty</i>	DATE CONSIDERED: <i>3/17/05</i>
* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Information Disclosure Statement (1449) Page 1 of 1